

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/806,080

DATE: 04/16/2001
TIME: 10:33:02

Input Set : A:\CPG.PTO.txt
Output Set: N:\CRF3\04162001\I806080.raw

3 <110> APPLICANT: Jomaa, Hassan
5 <120> TITLE OF INVENTION: Gene des 1-Desoxy-D-xylulose-Biosynthesewegs
7 <130> FILE REFERENCE: 15696
C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/806,080
C--> 10 <141> CURRENT FILING DATE: 2001-03-22
12 <150> PRIOR APPLICATION NUMBER: DE19923567.8
13 <151> PRIOR FILING DATE: 1999-05-22
15 <150> PRIOR APPLICATION NUMBER: DE19843279.8
16 <151> PRIOR FILING DATE: 1998-09-22
18 <160> NUMBER OF SEQ ID NOS: 6
20 <170> SOFTWARE: PatentIn Ver. 2.1
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 1467
24 <212> TYPE: DNA
25 <213> ORGANISM: Plasmodium falciparum
27 <220> FEATURE:
28 <221> NAME/KEY: CDS
29 <222> LOCATION: (1)..(1467)
31 <220> FEATURE:
32 <221> NAME/KEY: gene
33 <222> LOCATION: (1)..(1467)
35 <220> FEATURE:
36 <221> NAME/KEY: mRNA
37 <222> LOCATION: (1)..(1467)
39 <400> SEQUENCE: 1
40 atg aag aaa tat att tat ata tat ttt ttc ttc atc aca ata act att 48
41 Met Lys Lys Tyr Ile Tyr Ile Tyr Phe Phe Phe Ile Thr Ile Thr Ile
42 1 5 10 15
44 aat gat tta gta ata aat aat aca tca aaa tgt gtt tcc att gaa aga 96
45 Asn Asp Leu Val Ile Asn Asn Thr Ser Lys Cys Val Ser Ile Glu Arg
46 20 25 30
48 aga aaa aat aac gca tat ata aat tat ggt ata gga tat aat gga cca 144
49 Arg Lys Asn Asn Ala Tyr Ile Asn Tyr Gly Ile Gly Tyr Asn Gly Pro
50 35 40 45
52 gat aat aaa ata aca aag agt aga aqa tgt aaa aqa ata aag tta tgc 192
53 Asp Asn Lys Ile Thr Lys Ser Arg Arg Cys Lys Arg Ile Lys Leu Cys
54 50 55 60
56 aaa aag gat tta ata gat att ggt gca ata aag aaa cca att aat gla 240
57 Lys Lys Asp Leu Ile Asp Ile Gly Ala Ile Lys Lys Pro Ile Asn Val
58 65 70 75 80
60 gca att ttt gga agt act ggt agt ata ggt acg aat gct tta aat ata 288
61 Ala Ile Phe Gly Ser Thr Gly Ser Ile Gly Thr Asn Ala Leu Asn Ile
62 85 90 95
64 ata agg gag tgt aat aaa att gaa aat gtt ttt aat gtt aaa gca ttg 336
65 Ile Arg Glu Cys Asn Lys Ile Glu Asn Val Phe Asn Val Lys Ala Leu
66 100 105 110
68 tat gtg aat aag agt gtg aat gaa tta tat gaa caa gct aga gaa ttt 384

DATE: 04/16/2001
TIME: 10:33:02

Input Set : A:\CPG.PTO.txt
Output Set: N:\CRF3\04162001\I806080.raw

[illegible]

69	Tyr	Val	Asn	Lys	Ser	Val	Asn	Glu	Leu	Tyr	Glu	Gln	Ala	Arg	Glu	Phe	
70			115					120					125				
72	tta	cca	gaa	tat	ttg	tgt	ata	cat	gat	aaa	agt	gta	tat	gaa	gaa	tta	432
73	Leu	Pro	Glu	Tyr	Leu	Cys	Ile	His	Asp	Lys	Ser	Val	Tyr	Glu	Glu	Leu	
74			130				135					140					
76	aaa	gaa	ctg	gta	aaa	aat	ata	aaa	gat	tat	aaa	cct	ata	ata	ttg	tgt	480
77	Lys	Glu	Leu	Val	Lys	Asn	Ile	Lys	Asp	Tyr	Lys	Pro	Ile	Ile	Leu	Cys	
78	145					150					155					160	
80	ggt	gat	gaa	ggg	atg	aaa	gaa	ata	tgt	agt	agt	aat	agt	ata	gat	aaa	528
81	Gly	Asp	Glu	Gly	Met	Lys	Glu	Ile	Cys	Ser	Ser	Asn	Ser	Ile	Asp	Lys	
82					165					170					175		
84	ata	gtt	att	ggt	att	gat	tct	ttt	caa	gga	tta	tat	tct	act	atg	tat	576
85	Ile	Val	Ile	Gly	Ile	Asp	Ser	Phe	Gln	Gly	Leu	Tyr	Ser	Thr	Met	Tyr	
86				180					185					190			
88	gca	att	atg	aat	aat	aaa	ata	gtt	gcg	tta	gct	aat	aaa	gaa	tcc	att	624
89	Ala	Ile	Met	Asn	Asn	Lys	Ile	Val	Ala	Leu	Ala	Asn	Lys	Glu	Ser	Ile	
90			195					200				205					
92	gtc	tct	gct	ggt	ttc	ttt	tta	aag	aaa	tta	tta	aat	att	cat	aaa	aat	672
93	Val	Ser	Ala	Gly	Phe	Phe	Leu	Lys	Lys	Leu	Leu	Asn	Ile	His	Lys	Asn	
94		210				215						220					
96	gca	aag	ata	ata	cct	gtt	gat	tca	gaa	cat	agt	gct	ata	ttt	caa	tgt	720
97	Ala	Lys	Ile	Ile	Pro	Val	Asp	Ser	Glu	His	Ser	Ala	Ile	Phe	Gln	Cys	
98	225					230					235					240	
100	tta	gat	aat	aat	aag	gta	tta	aaa	aca	aaa	tgt	tta	caa	gac	aat	ttt	768
101	Leu	Asp	Asn	Asn	Lys	Val	Leu	Lys	Thr	Lys	Cys	Leu	Gln	Asp	Asn	Phe	
102					245					250					255		
104	tct	aaa	att	aac	aat	ata	aat	aaa	ata	ttt	tta	tgt	tca	tct	gga	ggt	816
105	Ser	Lys	Ile	Asn	Asn	Ile	Asn	Lys	Ile	Phe	Leu	Cys	Ser	Ser	Gly	Gly	
106				260					265					270			
108	cca	ttt	caa	aat	tta	act	atg	gac	gaa	tta	aaa	aat	gta	aca	tca	gaa	864
109	Pro	Phe	Gln	Asn	Leu	Thr	Met	Asp	Glu	Leu	Lys	Asn	Val	Thr	Ser	Glu	
110			275					280					285				
112	aat	gct	tta	aag	cat	cct	aaa	tgg	aaa	atg	ggt	aag	aaa	ata	act	ata	912
113	Asn	Ala	Leu	Lys	His	Pro	Lys	Trp	Lys	Met	Gly	Lys	Lys	Ile	Thr	Ile	
114		290					295					300					
116	gat	tct	gca	act	atg	atg	aat	aaa	ggt	tta	gag	gtt	ata	gaa	acc	cat	960
117	Asp	Ser	Ala	Thr	Met	Met	Asn	Lys	Gly	Leu	Glu	Val	Ile	Glu	Thr	His	

RAW SEQUENCE LISTING

DATE: 04/16/2001

PATENT APPLICATION: US/09/806,080

TIME: 10:33:02

Input Set : A:\CPG.PTO.txt

Output Set: N:\CRF3\04162001\I806080.raw

134 370 375 380
 136 cag gtt tca act ctt aca ttt cat aaa cct tct tta gaa cat ttc ccg 1200
 137 Gln Val Ser Thr Leu Thr Phe His Lys Pro Ser Leu Glu His Phe Pro
 138 385 390 395 400
 140 tgt att aaa tta gct tat caa gca ggt ata aaa gga aac ttt tat cca 1248
 141 Cys Ile Lys Leu Ala Tyr Gln Ala Gly Ile Lys Gly Asn Phe Tyr Pro
 142 405 410 415
 144 act gta cta aat gcg tca aat gaa ata gct aac aac tta ttt ttg aat 1296
 145 Thr Val Leu Asn Ala Ser Asn Glu Ile Ala Asn Asn Leu Phe Leu Asn
 146 420 425 430
 148 aat aaa att aaa tat ttt gat att tcc tct ata ata tcg caa gtt ctt 1344
 149 Asn Lys Ile Lys Tyr Phe Asp Ile Ser Ser Ile Ile Ser Gln Val Leu
 150 435 440 445
 152 gaa tct ttc aat tct caa aag gtt tcg gaa aat agt gaa gat tta atg 1392
 153 Glu Ser Phe Asn Ser Gln Lys Val Ser Glu Asn Ser Glu Asp Leu Met
 154 450 455 460
 156 aag caa att cta caa ata cat tct tgg gcc aaa gat aaa gct acc gat 1440
 157 Lys Gln Ile Leu Gln Ile His Ser Trp Ala Lys Asp Lys Ala Thr Asp
 158 465 470 475 480
 160 ala tac aac aaa cat aat tct tca tag 1467
 161 Ile Tyr Asn Lys His Asn Ser Ser
 162 485
 165 <210> SEQ ID NO: 2
 166 <211> LENGTH: 488
 167 <212> TYPE: PRT
 168 <213> ORGANISM: Plasmodium falciparum
 170 <400> SEQUENCE: 2
 171 Met Lys Lys Tyr Ile Tyr Ile Tyr Phe Phe Phe Ile Thr Ile Thr Ile
 172 1 5 10 15
 174 Asn Asp Leu Val Ile Asn Asn Thr Ser Lys Cys Val Ser Ile Glu Arg
 175 20 25 30
 177 Arg Lys Asn Asn Ala Tyr Ile Asn Tyr Gly Ile Gly Tyr Asn Gly Pro
 178 35 40 45
 180 Asp Asn Lys Ile Thr Lys Ser Arg Arg Cys Lys Arg Ile Lys Leu Cys
 181 50 55 60
 183 Lys Lys Asp Leu Ile Asp Ile Gly Ala Ile Lys Lys Pro Ile Asn Val
 184 65 70 75 80
 186 Ala Ile Phe Gly Ser Thr Gly Ser Ile Gly Thr Asn Ala Leu Asn Ile
 187 85 90 95
 189 Ile Arg Glu Cys Asn Lys Ile Glu Asn Val Phe Asn Val Lys Ala Leu
 190 100 105 110
 192 Tyr Val Asn Lys Ser Val Asn Glu Leu Tyr Glu Gln Ala Arg Glu Phe
 193 115 120 125
 195 Leu Pro Glu Tyr Leu Cys Ile His Asp Lys Ser Val Tyr Glu Glu Leu
 196 130 135 140
 198 Lys Glu Leu Val Lys Asn Ile Lys Asp Tyr Lys Pro Ile Ile Leu Cys
 199 145 150 155 160
 201 Gly Asp Glu Gly Met Lys Glu Ile Cys Ser Ser Asn Ser Ile Asp Lys
 202 165 170 175

DATE: 04/16/2001
TIME: 10:33:02

Input Set : A:\CPG.PTO.txt
Output Set: N:\CRF3\04162001\I806080.raw

204	Ile	Val	Ile	Gly	Ile	Asp	Ser	Phe	Gln	Gly	Leu	Tyr	Ser	Thr	Met	Tyr
205				180					185					190		
207	Ala	Ile	Met	Asn	Asn	Lys	Ile	Val	Ala	Leu	Ala	Asn	Lys	Glu	Ser	Ile
208			195					200					205			
210	Val	Ser	Ala	Gly	Phe	Phe	Leu	Lys	Lys	Leu	Leu	Asn	Ile	His	Lys	Asn
211		210					215					220				
213	Ala	Lys		Ile	Ile	Pro	Val	Asp	Ser	Glu	His	Ser	Ala	Ile	Phe	Gln
214	225						230					235				Cys
216	Leu	Asp	Asn	Asn	Lys	Val	Leu	Lys	Thr	Lys	Cys	Leu	Gln	Asp	Asn	Phe
217					245					250					255	
219	Ser	Lys	Ile	Asn	Asn	Ile	Asn	Lys	Ile	Phe	Leu	Cys	Ser	Ser	Gly	Gly
220				260					265					270		
222	Pro	Phe	Gln	Asn	Leu	Thr	Met	Asp	Glu	Leu	Lys	Asn	Val	Thr	Ser	Glu
223			275					280					285			
225	Asn	Ala	Leu	Lys	His	Pro	Lys	Trp	Lys	Met	Gly	Lys	Lys	Ile	Thr	Ile
226		290					295					300				
228	Asp	Ser	Ala	Thr	Met	Met	Asn	Lys	Gly	Leu	Glu	Val	Ile	Glu	Thr	His
229	305				310					315						320
231	Phe	Leu	Phe	Asp	Val	Asp	Tyr	Asn	Asp	Ile	Glu	Val	Ile	Val	His	Lys
232				325						330					335	
234	Glu	Cys	Ile	Ile	His	Ser	Cys	Val	Glu	Phe	Ile	Asp	Lys	Ser	Val	Ile
235			340						345					350		
237	Ser	Gln	Met	Tyr	Tyr	Pro	Asp	Met	Gln	Ile	Pro	Ile	Leu	Tyr	Ser	Leu
238			355					360					365			
240	Thr	Trp	Pro	Asp	Arg	Ile	Lys	Thr	Asn	Leu	Lys	Pro	Leu	Asp	Leu	Ala
241		370					375					380				
243	Gln	Val	Ser	Thr	Leu	Thr	Phe	His	Lys	Pro	Ser	Leu	Glu	His	Phe	Pro
244	385				390						395					400
246	Cys	Ile	Lys	Leu	Ala	Tyr	Gln	Ala	Gly	Ile	Lys	Gly	Asn	Phe	Tyr	Pro
247				405						410					415	
249	Thr	Val	Leu	Asn	Ala	Ser	Asn	Glu	Ile	Ala	Asn	Asn	Leu	Phe	Leu	Asn
250			420						425					430		
252	Asn	Lys	Ile	Lys	Tyr	Phe	Asp	Ile	Ser	Ser	Ile	Ile	Ser	Gln	Val	Leu
253			435					440					445			
255	Glu	Ser	Phe	Asn	Ser	Gln	Lys	Val	Ser	Glu	Asn	Ser	Glu	Asp	Leu	Met
256		450					455					460				
258	Lys	Gln	Ile	Leu	Gln	Ile	His	Ser	Trp	Ala	Lys	Asp	Lys	Ala	Thr	Asp
259	465						470				475					480

```

261 Ile Tyr Asn Lys His Asn Ser Ser
262                               485
266 <210> SEQ ID NO: 3
267 <211> LENGTH: 3872
268 <212> TYPE: DNA
269 <213> ORGANISM: Plasmodium falciparum
271 <220> FEATURE:
272 <221> NAME/KEY: CDS
273 <222> LOCATION: (126)..(3740)
275 <220> FEATURE:
276 <221> NAME/KEY: gene

```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/806,080

DATE: 04/16/2001
TIME: 10:33:02

Input Set : A:\CPG.PTO.txt
Output Set : N:\CRF3\04162001\I806080.raw

277 <222> LOCATION: (1)..(3870)
279 <220> FEATURE:
280 <221> NAME/KEY: mRNA
281 <222> LOCATION: (1)..(3870)
283 <400> SEQUENCE: 3
284 ggtaatatatac gtataatata tatataatat attctttacgt atgtatcatt tatgaatcat 60
286 aataatatattc taaattttacc ttccgttttt gctcgatctt ctcatctttcg tticagcttt 120
288 tatca tatg att ttt aat tat gtg ttt ttt aag aac ttt gta cca gtt gtt 170
289 Met Ile Phe Asn Tyr Val Phe Phe Lys Asn Phe Val Pro Val Val
290 1 5 10 15
292 cta tac att ctg ctt ata ata tat att aac tta aat ggc atg aat aat 218
293 Leu Tyr Ile Leu Leu Ile Ile Tyr Ile Asn Leu Asn Gly Met Asn Asn
294 20 25 30
296 aaa aat caa ata aaa aca gaa aaa att tat ata aag aaa ttg aat agg 266
297 Lys Asn Gln Ile Lys Thr Glu Lys Ile Tyr Ile Lys Lys Leu Asn Arg
298 35 40 45
300 ttg tca agg aaa aat tcy tta tgt agt tct aaa aat aaa ata gca tgc 314
301 Leu Ser Arg Lys Asn Ser Leu Cys Ser Ser Lys Asn Lys Ile Ala Cys
302 50 55 60
304 ttg ttc gal ata gga aat gat gat aat aga aat acg aca tat ggc tat 362
305 Leu Phe Asp Ile Gly Asn Asp Asp Asn Arg Asn Thr Thr Tyr Gly Tyr
306 65 70 75
308 aat gtg aat gtt aaa aat gat gat att aat tcc tta cta aaa aat aat 410
309 Asn Val Asn Val Lys Asn Asp Asp Ile Asn Ser Leu Leu Lys Asn Asn
310 80 85 90 95
312 tat agt aat aaa ttg tac atg gat aag agg aaa aat att aat aat gta 458
313 Tyr Ser Asn Lys Leu Tyr Met Asp Lys Arg Lys Asn Ile Asn Asn Val
314 100 105 110
316 att agt act aat aaa ata tct ggg tcc att tca aat att tgt agt aga 506
317 Ile Ser Thr Asn Lys Ile Ser Gly Ser Ile Ser Asn Ile Cys Ser Arg
318 115 120 125
320 aat caa aaa gaa aat gaa caa aaa aga aat aaa caa aga tgt tta act 554
321 Asn Gln Lys Glu Asn Glu Gln Lys Arg Asn Lys Gln Arg Cys Leu Thr
322 130 135 140
324 caa tgt cac act tat aat atg tca cat gaa cag gac aaa cta gct aat 602
325 Gln Cys His Thr Tyr Asn Met Ser His Glu Gln Asp Lys Leu Ala Asn
326 145 150 155
328 gat aat aat agg aat aat aaa aag aat ttt aat tta tta ttt ata aat 650
329 Asp Asn Asn Arg Asn Asn Lys Lys Asn Phe Asn Leu Leu Phe Ile Asn
330 160 165 170 175
332 tat ttt aat ttg aaa cga atg aaa aat tct ctt cta aat aaa gac aat 698
333 Tyr Phe Asn Leu Lys Arg Met Lys Asn Ser Leu Leu Asn Lys Asp Asn
334 180 185 190
336 ttc ttt tac tgt aaa gaa aaa aaa ttg tca ttt ctg cat aag gcc tat 746
337 Phe Phe Tyr Cys Lys Glu Lys Lys Leu Ser Phe Leu His Lys Ala Tyr
338 195 200 205
340 aaa aaa aaa aat tgc act ttt caa aat tat agt tta aaa aga aaa tct 794
341 Lys Lys Lys Asn Cys Thr Phe Gln Asn Tyr Ser Leu Lys Arg Lys Ser
342 210 215 220

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/806,080

DATE: 04/16/2001

TIME: 10:33:04

Input Set : A:\CPG.PTO.txt

Output Set: N:\CRF3\04162001\I806080.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application Number
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date

T01090"08090850